alteration in these bodies in 9 cases of paralysis agitans, and in an infant dying in convulsions the glandules were negative.

There remains much to be known relative to the exact nature and function of these glandules and their real importance in the body economy. It is hoped that the preceding morphological notes may be of value in stimulating study of these bodies along other lines, and that this may throw some new light on the function of these structures, especially in conditions of impaired nutrition.

A TUMOR OF THE MITRAL VALVE.

By Leonard Blumgart, M.D.,
of New York.

(From the Pathological Institute of the Kaiser Wilhelm University at Strassburg, Prof. H. Chiari, Director.)

While making an autopsy (No. III, April 2, 1907), I came upon a tumor of the left cusp of the mitral valve, which was given to me for purposes of examination.

The case was that of a woman, aged eighty-six years from the Home for the Aged. Disease of the heart was given as the cause of death. There was no clinical history.

The following are autopsy notes: A female body, 158 cm. long, well developed, and fairly well nourished. The brain is slightly œdematous, and its gyri atrophic. The lungs are œdematous, and the seat of a high grade emphysema. The trachea and bronchi show redness of their mucous membrane, which is also covered with a mucopurulent secretion. The peribronchial lymph glands are anthracotic and calcified. The kidneys are small, their capsules adherent, and the parenchyma shows degeneration. The other organs are normal, except the heart, which shows the following: (Fig. 1): The pericardium is smooth, and there is no exudate. The heart is enlarged and relaxed, weighing 495 grams. The right ventricle and right auricle are dilated, the former is slightly hypertrophied. The left ventricle is markedly hypertrophied, its wall being 2.5 cm. thick. The left auricle is also dilated. The endocardium is smooth. The myocardium shows no pathological change. The tricuspid and pulmonary valves are normal. The aortic valve is somewhat thickened, and in one place contains a calcified node. The aorta shows small areas of endarteritis deformans of a moderate degree. On the auricular side of the left or posterior cusp of the mitral valve is a tumor, 3.5×2.5×2 cm. in size, irregularly round, smooth, glistening, and softly elastic. It is pedunculated, the pedicle resting on the cusp, 5 mm. from its free edge. The rest of the cusp shows several slight aneurysmatic bulgings about 0.5 cm. in depth, whose convexities are upward.

The entire heart was placed in a solution of 100 parts of alcohol, 50 per cent., and 2 parts of formalin (Museum Preparation No. 3744). After hardening, the tumor was cut as indicated by the dotted line in Fig. 1. The cut surface of the right half of the tumor is shown in Fig. 2. The cut surface is seen to be a deep homogeneous brown red. A definite capsule is seen to surround the tumor, except at its inferior hollow ventricular surface. The capsule starts from the insertion of cusp, and passes over the tumor to continue into one of the tendons.

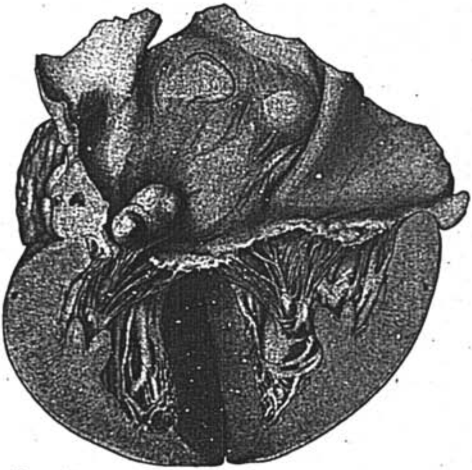

FIG. 1.—View of the interior of the heart showing the position of the tumor of the mitral leaflet.

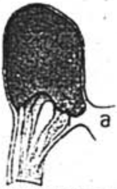

FIG. 2.—Cut surface of the right half of the tumor of the mitral leaflet (actual size).

A slice of the tumor was carried through alcohol, embedded in celloidin, and sections were stained with hematoxylin-eosin, hematoxylin-van Gieson, elastin (Weigert), hematoxylin-muci-carmin, muchematin, and thionin.

Microscopically, the tumor is composed of loose connective tissue, in whose meshes there is a large amount of granular brown blood pigment, most of which is situated beneath the capsule. Scattered through the fibrous tissue are areas of star- and spindle-shaped cells. These areas give a faint but positive reaction with muci-carmin and thionin, but are negative to muchematin. They also take a deep blue stain with hematoxylin-eosin. The blood vessels of the tumor are large cavernous spaces originating and entering the tumor from its ventricular surface; they subdivide, and branches reach to the capsule. The walls of the bloodvessels are lined with a single layer of flat endothelium and contain a fine layer of elastic tissue. No elastic tissue is found in the tumor. The capsule of the tumor, which varies in thickness, is composed of connective tissue, with a fine network of elastic fibers. Its outer surface is covered with a single layer of flat endothelial cells. The inferior hollow ventricular surface, which is without a capsule, is covered by a single layer of flat endothelial cells.

Tumors of the valves of the heart have been described by Curtis,[1] Debove,[2] Ribbert,[3] Guth,[4] Leonhardt,[5] and Reitman.[6]

My case corresponds with these in that it contains mucin-reacting tissue, fibrous, and elastic tissue. Following these observers, one would call the tumor a fibromyxoma. But the lack of capsule on its ventricular surface, together with the aneurysmatic bulgings on the rest of the cusp, inclines one to view this not as a new-growth, but as an organized thrombus in an aneurysm of the mitral valve in which the capsule around the thrombus is nothing but the dilated cusp.

Examining the literature as given by Leonhardt, I find no report of a similar condition. As there is a difference of opinion as to whether all fibro-myxomas of the heart, and especially of the left auricle, are true newgrowths or organized thrombi on the basis of a former endocarditis, I report the case in the hope that this and observations on similar cases in the future may help to clear up the question.

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[1] Arch. de physiol. norm. et path., 1871-72, iv.

[2] Myxome pédiculé développé sur la valvule tricuspidale, Bull. de la Soc. anat. de Paris, 1873.

[3] Neumann. Ref. i. d. Deut. med. Woch., 1904, Lit. Beil, S. 9. Ueber Rückbildung an Zellen und Geweben und über die Enstheung der Geschwülste, Biblioth. med. Abt. C., 1897, Heft 9; Geschwülstehere, 1904, S. 233, ff.

[4] Prager med. Woch., 1898, Nr. 8.

[5] Ueber Myxome des Herzens insbesondere der Herzklappen, Virchow's Archiv, 1905, clxxxi, 347.

[6] Ein Fall von primärem Klappentumor des Herzens, Zeitschr. f. Heilk., 1905, Heft 1.